



U. S. COAST AND GEODETIC SURVEY.

*A. M. Horn*, Superintendent.

State: *Wash. Ter.*

DESCRIPTIVE REPORT.

*Hydrographic Sheet No. 1814.*

LOCALITY:

*Rozario Straits  
and  
Bellingham Channel*

*1887.*

CHIEF OF PARTY:

*Lt. C. T. Foxe, U. S. N.*



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Descriptive Report to accompany Hydrographic Sheet No 1814 of Rosario Strait & Bellingham Channel, Wash. Terr., by Lieut. G. T. Horse U.S.N. Report made by Lieut. N. T. Mays, U.S.N.

The work done on this sheet embraced the hydrography of Rosario Strait and Bellingham Channel from the entrance to Alcepcion Pass to a parallel passing through Yiti Rks, omitting that portion of Rosario Strait west of Cypress Id., a sheet  $14\frac{1}{2}$  miles long and from one to six miles wide and containing about 55 sq. miles of hydrography.

Rosario Strait is, generally speaking, very deep with the exception of a sand flat in the bight or indentation formed by Lopez and Decatur Ids. on the West side of the straits.

The greatest depth found was 87 fms. about  $\frac{1}{2}$  mile S. E. of Belle Rk.

The currents are very strong, especially in the vicinity of Bird Rks, and heavy tide rips exist, the heaviest also near Bird Rks.

South of James Id. the flood current begins on the East side of the straits from  $\frac{1}{2}$  to  $1\frac{1}{2}$  hours

before the ebb ceases on the west side.

With a rising tide I have found, near Belle Pt., an ebb current estimated at four knots an hour.

The current through Deception Pass is very strong and occasions heavy tide rips and whirls.

The flood current seems to draw so strongly into the Pass as to occasion an easterly set which can be noticed several miles south of the Pass and even on the west side of the Strait. With the ebb tide the reverse is the case. In Bellingham Channel, the flood current comes in from the south and meets that from the north off the Peninsula occasioning tide rips and an easterly or cross channel current until the two unite and flow to the N.E. along west side of Guemes Id.

The flood current at the north end of Cypress Id. divides, part flowing S.E. along shore of Cypress Id. and partly directly east along the south shore of Sinclair Id. All unite between the N. end of Guemes Id. and Sinclair Id.

With the ebb tide the currents divide at about the same point, part of that going to S.E. branching off just north of the Peninsula and

flowing to N<sup>d</sup> + W<sup>d</sup> along Cypress Id. shore  
 Tide Rips are nearly always to be found south  
 of Cypress Id., caused by the various currents  
 out of or into Bellingham Channel, Ship Harbor,  
 Thatcher Pass, and the West branch of Rosario  
 Straits.

### Dangers.

All rocks are well marked by the kelp except  
 when the current is so strong as to run it  
 under. The kelp is the ordinary long stemmed  
 variety. My observation is that this kelp is rarely  
 found in more than four fathoms or less than  
 one fathom. It is always present near rocks  
 although strong currents sometimes run it under  
 so that it can not be depended on as a warning.

Directly West of the N.W. point of Whidby Island  
 which is South point of entrance to Deception Pass,  
 there is a small cluster of rocks, bare at extreme  
 low water, a little more than an eighth of a mile off  
 shore. Off S. side of Deception Id. another and  
 larger cluster of rocks exists. This shows points at all  
 times and is well marked. In and off the entrance  
 of Reservation Bay are three clusters of rocks of  
 which but one, the farthest off shore, is ever entirely

Covered. This cluster is, in common with all, well marked by kelp. Sunkan rocks also exist off N. point of Reservation Bay in from three to five fms. of water, and one in mid-channel inside N.W. Island.

Dermis Shoal S.W. of Allan Id. and a little over  $\frac{1}{4}$  mile off shore is awash at extreme low tides. It is well known, out of the usual track of steamers, and well marked by kelp except during strength of tide, when the kelp runs under.

In the middle of Burrows Bay a shoal having a least depth of five fathoms was found.

Kellett ledge, off Johnson Pt., which is the most E<sup>n</sup> point of Lopez Id. is a very dangerous ledge of rocks, bare at half tide, and with from 7 to 9 fms. in the channel inside.

$\frac{1}{4}$  mile off point on which A. S. E. Head is located is a small sandbank having but 15 ft. on it at low tide.

On the East side Decatur Id., less than  $\frac{1}{4}$  mile off shore, is a single large boulder in about 2 fms. This rock is bare except at High Water, and it is the only indication found of the "Dot Id." marked on the charts. In Lopez Pass, but little south of the

Middle, is a large rock which is bare at half tide.

Belle Rk. is the summit of a rocky shoal situated  $\frac{3}{4}$  mile N.E. of Bird Rks.

This is a very dangerous rock and should be marked by a beacon. It is only bare at low water and it is in the midst of the strongest currents and heaviest tide rips to be found in Rosario Straits. The kelp, of which there is an abundance, only shows at slack water and then for but a short time.

On the chart, sunken rocks are indicated in the middle of the Bay at N.E. end Saccatur Id. These were carefully searched for during several days and one day was devoted to dragging for them. No trace of them could be found or anything indicate the presence of rocks, the bottom being principally sand and shell.

A small shoal with but 13 ft. at low water is found off S end of the passage inside James Id. The Hydrographic Work done did not include Lawson Rk. in middle of entrance to Thatcher Pass. It is, however, a

bad rock, and should be marked.

The shoal extending from S.W. end of Cypress Id. is well known and well marked, the buoy being excellently placed.

In Deep Water Bay, east side of Cypress Id., and off opening of Secret Harbor, a five foot shoal was found, having from four to five fathoms inside. A six fathom "Halibut bank", well known to the fishermen, exists in middle of Deepwater Bay.

A thirteen foot rocky shoal of small extent was found  $\frac{1}{4}$  mile to N<sup>2</sup> + W<sup>2</sup> of the N.W.<sup>2</sup> of the Cone Ids. also a small seven foot spot East of the center one of the Cone Ids.

Cypress Shoal,  $\frac{1}{2}$  mile off N. end of Cypress Id. and N.W. of Rock Id. consists of a rocky ledge having three principal points, only one, the most southern, being ever bare but this is bare at half tide. Good water exists between the points of the shoal but all classes of vessels should keep well clear of the whole shoal, as the current is very strong and the heavy bed of kelp which exists is run entirely under water and out of sight.

Quite a large rocky shoal is found  $\frac{1}{2}$  mile

North of Sinclair Id. The very heavy bed of kelp prevented a thorough search for point of rock, but one rock bare at extreme low tide was found in centre of shoal.

### Anchorage.

The best anchorage near entrance to Rosario Strait is found in Watnough Sight near South end of Lopez Id. This is well sheltered, having Boulder Id. off the opening of the light, and has excellent holding ground.

Good anchorage is also found in Bay near N.E. end of Decatur Id. to Wd of James Id. Anchorage, but no protection, can also be found almost anywhere along West side of Straits between the anchorages named, but a strong current will be found and poor holding ground. On the East side of the Straits, small craft can find anchorage in Reservation Bay just north of Deception Pass.

The next anchorage north of this is found in Burrows Bay where vessels can anchor anywhere on East side, except at extreme North end, with fair holding ground but strong currents.

The small light on East side of Allan Id.

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affords anchorage for a small vessel in from 8 to 10 fms.

Good anchorage is found along N. shore of Fidalgo Id. especially in light near W. end. Deep Water Bay, Cypress Id. affords anchorage, with the usual objection of strong currents. Small craft may anchor nearer to Secret Harbor keeping pretty well over to N. shore to avoid 5-foot bank.

Eagle Harbor, Cypress Id. is well protected, is out of the strength of the current, and has excellent holding ground, but the anchorage ground is very limited, as the flat jumps off suddenly into deep water.

There are no towns, post-offices, or wharves on this Strait. A few fishermen are engaged in fishing and making oil. A sailing vessel seldom passes through Rosario Straits, the trade of the neighboring region being carried by steamers.

Very respectfully,

To the  
Superintendent C. & G. Survey

H. T. Mayo,  
Lieut. U. S. N.